Property Data

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Durethan® AKV30FN04

(PA66+PA6)–GF30 FR(40)

30% Glass Reinforced, Injection Molding, Heat Stabilized, Flame Retardant (halogen free)

PROPERTIES	TYPICAL DATA	UNIT	TEST METHOD
RHEOLOGICAL PROPERTIES	DRY / COND		
Molding shrinkage (parallel)	0.3 / *	%	ISO 294–4
Molding shrinkage (normal)	0.8 / *	%	ISO 294–4
MECHANICAL PROPERTIES	DRY / COND		
Tensile modulus	10500 / 6500	MPa	ISO 527–1/–2
Stress at break	138 / 87	MPa	ISO 527–1/–2
Strain at break	2.9 / 5.7	%	ISO 527–1/–2
Flexural modulus	10100 / 6300	MPa	ISO 178
Flexural strength	230 / 150	MPa	ISO 178
Tensile modulus (200°C)	3320	MPa	ISO 527–1/–2
Charpy impact strength (+23°C)	65 / 70	kJ/m²	ISO 179/1eU
Charpy impact strength (–30°C)	60 / 60	kJ/m²	ISO 179/1eU
Charpy notched impact strength (+23°C)	<10 / 11	kJ/m²	ISO 179/1eA
Charpy notched impact strength (–30°C)	<10 / <10	kJ/m²	ISO 179/1eA
Izod notched impact strength (+23°C)	<10 / 12	kJ/m²	ISO 180/1A
THERMAL PROPERTIES	DRY / COND		
Melting temperature (10°C/min)	260 / *	°C	ISO 11357–1/–3
Temp. of deflection under load (1.80 MPa)	230 / *	°C	ISO 75–1/–2
Temp. of deflection under load (0.45 MPa)	250 / *	°C	ISO 75–1/–2
Coeff. of linear therm. expansion (parallel)	0.2 / *	E–4/°C	ISO 11359–1/–2
Coeff. of linear therm. expansion (normal)	0.7 / *	E–4/°C	ISO 11359–1/–2
Burning Behav. at 1.5 mm nom. thickn.	V–0 / *	class	IEC 60695–11–10

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PROPERTIES	TYPICAL DATA	UNIT	TEST METHOD
Thickness tested	1.5 / *	mm	IEC 60695-11-10
Burning Behav. at 3.0 mm nom. thickn.	V-0 / *	class	IEC 60695-11-10
Thickness tested	3 / *	mm	IEC 60695-11-10
Burning Behav. at 0.4 mm nom. thickn.	V-0 / *	class	IEC 60695-11-10
Thickness tested	0.4 / *	mm	IEC 60695-11-10
Burning Behav. at 0.75 mm nom. thickn.	V-0 / *	class	IEC 60695-11-10
Thickness tested	0.75 / *	mm	IEC 60695-11-10
Oxygen index	34 / *	%	ISO 4589-1/-2
Glow Wire Flammability Index GWFI	960 / -	°C	IEC 60695-2-12
GWFI (Thickness (1) tested)	0.4 / -	mm	IEC 60695-2-12
Glow Wire Flammability Index GWFI	960 / -	°C	IEC 60695-2-12
GWFI (Thickness (2) tested)	0.75 / -	mm	IEC 60695-2-12
Glow Wire Ignition Temperature GWIT	750 / -	°C	IEC 60695-2-13
GWIT (Thickness (1) tested)	0.4 / -	mm	IEC 60695-2-13
Glow Wire Ignition Temperature GWIT	750 / -	°C	IEC 60695-2-13
GWIT (Thickness (2) tested)	0.75 / -	mm	IEC 60695-2-13

ELECTRICAL PROPERTIES	DRY / COND		
Relative permittivity (100Hz)	4 / 7.3	-	IEC 62631-2-1
Relative permittivity (1 MHz)	3.4 / 3.9	-	IEC 62631-2-1
Dissipation factor (100 Hz)	200 / 1090	E-4	IEC 62631-2-1
Dissipation factor (1 MHz)	175 / 555	E-4	IEC 62631-2-1
Volume resistivity	>1E13 / 2.7E11	Ohm*m	IEC 62631-3-1
Surface resistivity	* / 2.7E14	Ohm	IEC 62631-3-2
Electric strength	40 / 36	kV/mm	IEC 60243-1
Comparative tracking index	600 / -	V	IEC 60112

OTHER PROPERTIES	DRY / COND		
Water absorption	4.4 / *	%	Sim. to ISO 62

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PROPERTIES	TYPICAL DATA	UNIT	TEST METHOD
Humidity absorption	1.4 / *	%	Sim. to ISO 62
Density	1420 / –	kg/m³	ISO 1183

PROCESSING RECOMMENDATIONS	VALUE		
Drying temperature dry air dryer	80	°C	
Drying time dry air dryer	2–6	h	
Residual moisture content	0.03–0.07	%	acc. to Karl Fischer
Melt temperature (Tmin – Tmax)	265–285	°C	
Mold temperature	80–100	°C	